

Research of Civil Engineering Construction Site Management Optimization Strategy Based on Capability Spectrum Method

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ABSTRACT. *In recent years, China's urban construction level has been continuously improved, and the number of construction projects has also increased year by year, which has promoted the vigorous development of the construction industry. Civil construction is an important part of construction engineering, and it has a direct impact on the quality of the project. Therefore, it is necessary to do a good job of the management of the civil construction site to avoid problems in the civil construction. Personal safety. Comprehensive and effective construction site management can not only improve the safety and efficiency of construction, but also help improve the economic benefits of construction enterprises, and is an important way to ensure safe construction. Therefore, the article mainly analyzes the optimization strategy of construction site management of civil engineering construction.*

KEYWORDS: *Optimization strategy, Capability spectrum, Construction site management*

1. Introduction

The rapid social and economic development has led to the continuous development of various construction projects. Under such circumstances, the construction projects and scale of various construction projects have been continuously expanded, which has created a very favorable environment for the overall development of the construction engineering industry. However, at the same time, higher requirements have been put forward for all aspects of civil engineering construction site management of construction projects. Therefore, the relevant staff must fully consider the civil engineering construction issues during the project development process, and then purposefully strengthen the research on the weak links in the construction quality during the construction process, and continuously carry out innovation and reform of management technology, so that On-site construction management of civil engineering can maximize the role of management and control.

2. Importance of Construction Engineering Technology Site Construction Management

In the course of construction project construction, in order to improve the quality of the project, it is necessary to build a set of sound construction project quality management system before construction project construction. From the point of professional and technical management, the quality assurance system is actually the construction program of construction project. , Construction technology, construction technology, construction quality control and inspection specifications. This sets a constraint standard for the construction quality of a construction project. Under such a standard, the construction quality of a construction project is effectively guaranteed. In addition, in the construction site management of construction technology, the organic combination of some construction scientific methods and construction conditions can also effectively improve the overall quality of construction projects.

In the construction process of a construction project, it is necessary to strengthen the professional and technical management of all links in the entire process, reduce the losses caused by technical problems during the construction process, and improve the construction efficiency and economic benefits. During the construction process, the management work mainly includes reasonable control of construction project funds, and reasonable control of funds, which requires strengthening management of material purchase, use and construction progress control. In this way, not only the construction technology can be improved, but also the quality of the project construction can be guaranteed. At the same time, the construction cost of the construction project can be greatly reduced, and the economic and social benefits of the construction enterprise can be increased.

3. Important Contents of Civil Engineering Construction Site Management

The main goal of construction site management is leveling to ensure that the site is sufficiently leveled. This requires the construction personnel to clean up the obstacles on the construction site in a timely manner to ensure that no water will accumulate during the rainy season. Construct a complete construction site drainage system, set up drainage ditches and sedimentation grounds, reasonably control the flow of sewage, prevent sewage from entering the municipal river network, treat the dust at the construction site, and cover the dust source.

The transportation of construction materials and the movement of equipment are the focus of much attention in the management of civil engineering construction sites of construction projects. Reasonably planning the roads on the site will not only effectively improve the efficiency and level of construction, but also ensure construction quality and safety. When setting up roads in the construction site, it should be ensured that the roads are normal enough. During the road design process, circulation arterials are added to ensure that the arterials can meet the transportation capacity and fire protection requirements. At the same time, the construction arterial roads must be leveled and cleaned, and road drainage systems must be continuously

improved. In the use of construction roads, temporary and permanent roads should be combined as far as possible.

The key foundation of civil engineering construction is building materials, which is also the focus of civil construction site management. When stacking and managing construction materials, the order of entering the site should be reasonably arranged according to the quantity, volume, service life and transportation mode of the materials, so as to promote the utilization of the site area. At the same time, various tools should be checked in detail, and the materials should be reasonably stacked to ensure compliance with the design requirements of the construction drawings, and the improperly set materials should be handled appropriately.

In the safety management of the construction site, it is also necessary to do a good job of health and epidemic prevention management. Therefore, the construction enterprise can set up a sound health clinic, and configure common ambulance materials and facilities. For smaller civil works, the office and the health room can be shared in one room. At the construction site, various full-time or part-time health personnel can also be deployed to ensure that the injured can be treated in time. At the same time, the sanitation of the canteens and dormitories at the construction site shall be inspected in detail, and infectious diseases shall be fully prevented, and the sanitation and epidemic management at the construction site shall be fully guaranteed.

Because the civil construction of a building project has a certain degree of uniqueness, during the construction process, more temporary equipment is involved. Among them, the most common temporary equipment mainly includes, during the construction process of civil engineering, simple combined house equipment for temporary construction and lease must be provided. And scientific management of temporary equipment, reasonable selection of equipment layout address to ensure reasonable materials and equipment engineering quality.

4. Problems in the Management of Civil Construction Sites

Before the construction project is officially started, the professional department will be required to design the construction plan. The construction staff will need to carry out the construction activities according to the design plan. However, the construction staff of many companies do not attach too much importance to the design plan due to their low professional level, which leads to site construction and construction. There are large differences between the designs; at the same time, some construction workers have a low level of construction technology. As the main implementer of the construction, they are responsible for maintaining the quality of the construction and need professional technology and ideas. Non-compliance with regulations has affected construction safety [2]. In addition, some construction workers are vulnerable to safety accidents due to their weak safety awareness and lack of awareness of compliance with discipline rules.

Civil construction site supervision is an important task to ensure the orderly execution of construction site work. It involves a lot of content, including engineering

project material storage, construction period management, and management of construction personnel's behavior and operation standards. These links may affect project quality. In order to save construction costs, some companies use good materials and use low-quality and low-cost materials; and some companies blindly catch up with progress and carry out construction activities at night. Poor lighting conditions on the site can easily cause safety accidents. Therefore, in order to ensure the safety of the construction site, it is necessary to strengthen the supervision and management of the construction site and actively play the role of site supervision.

The construction technology used in the construction site management process has an important influence. Therefore, it is necessary to do a good job of the management of technical personnel. Civil construction requires a large number of technical personnel with professional qualities and skills. However, many Chinese enterprises have low professional levels of construction personnel, weak construction skills, and poor management of equipment during the construction management process, which caused problems in the storage of some construction equipment and did not carry out actual replacement, resulting in the ineffective construction quality. Protection.

5. Strategies for the Management of Civil Construction Sites

By strengthening safety management, it will help to ensure the smooth development of civil construction site construction work. Therefore, in the actual construction process, it is necessary to formulate a relatively comprehensive set of management measures according to the actual situation of the construction site, and to evaluate and analyze the risks existing in the construction site environment, thereby formulating scientific rules and regulations to manage the construction Standards for personnel behavior. At the same time, supervision during the construction process should be strengthened, detailed analysis of the problems that occur, and the causes and solutions to be recorded should be recorded. At the same time, material inspection should be strengthened to prevent people from filling up and affecting the quality of the project. Potential risks exist at any stage in the construction process. Safety accidents may occur at the construction site anytime, anywhere. Without sufficient warning and preparation, it is likely to cause major accidents [4]. Therefore, before formal construction, safety precautions need to be prepared and corresponding plans must be established to prepare safety equipment that may be used so that construction personnel can escape from the scene after an accident. Incidents that occur during construction should be documented for later reorganization and verification.

In the process of on-site construction, enterprises should abide by the principle of quality first, and formulate a scientific quality control system. The quality control system can ensure the smooth development of quality control work, and at the same time help improve the scientificity of construction work. The enterprise shall step up the liaison with the construction party, the supervision party and the construction party, and sign a tripartite agreement, and the three parties shall jointly supervise and

control the construction quality, so as to ensure the quality of the project construction and ensure the scientificity of the project construction. If there are any changes during the construction process, it is necessary to ask the superior department for approval before construction can be carried out. After the construction is completed, the three parties shall observe their respective responsibilities, inspect the construction quality of the project, and avoid accidents caused by the construction quality.

Raw materials are an important foundation for construction projects. Therefore, the inspection year of construction materials needs to be done well. Before construction, professionals need to check the quality of construction materials, and at the same time, construction materials need to be sent to professional laboratories for inspection. Technical staff The use of building materials should also be recorded. Doing a good job of quality inspection of building materials is to avoid major accidents caused by the use of unqualified materials during the construction process. At the same time, in order to avoid the occurrence of stolen and stolen materials, the management of construction materials needs to be done. You can install a monitor Avoid material theft. Material price control is also an important part of engineering cost control. How to purchase the most cost-effective building materials with limited funds is a practical problem that construction enterprises need to solve. Prior to material procurement, a full market survey should be done. Only by fully understanding the market price and quality of materials, can we choose the appropriate building materials according to the quality requirements of construction projects, thereby improving the scientificity of material procurement and ensuring the construction of construction quality. In addition, materials need to be well stored and stored at the construction site, and the construction personnel should reasonably place various materials to prevent the performance of the materials from being affected. In order to obtain private benefits, some enterprise procurement staff are better off, which will affect the economic benefits of the enterprise. Therefore, it is necessary to improve the professional ethics and professional quality of procurement personnel, strengthen material management and accounting, and improve the level of material management [5].

6. Conclusion

In the process of civil engineering site construction management, relevant staff must promptly change the traditional concept of civil engineering site construction management, and then carry out a series of optimization and innovation of the site management plan according to the actual development situation and civil engineering situation. In this process, relevant staff members must not only strengthen the management of the quality of civil engineering construction, but also effectively manage the safety during the construction of civil engineering. In order to ensure that staff can strictly follow the safe construction standards and safe construction requirements, effectively complete each step of the construction site operation. In addition, the relevant staff must also strengthen the management of civil engineering construction costs, so as to lay a good foundation for the comprehensive development of civil engineering construction site management.

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